

QP Code:103103

Reg. No.:.....

**PG Degree Regular/Supplementary Examinations in Biochemistry  
(MD) July 2023**

**Paper III – Nutrition and Metabolism**

**Time: 3 hrs**

**Max marks:100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essay:**

**(20)**

1. Classify vitamins. Describe the sources, active forms, metabolic role, deficiency manifestations and RDA of vitamin D. Add a note on its regulation.

**Short essays:**

**(8x10=80)**

2. National nutritional programs.
3. Describe the absorption and transport of iron.
4. Laboratory diagnosis of nutritional disorders.
5. Steps and significance of HMP shunt pathway.
6. Describe the metabolism of sulphur containing amino acids. Add a note on the associated inborn errors of metabolism.
7. Oxidation of fatty acids and associated disorders of metabolism.
8. Sources, biochemical functions and deficiency manifestations of vitamin B<sub>6</sub>.
9. Metabolism of xenobiotics.

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